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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,577	10/17/2003	Junichi Hayashi	00862.023286	8946
5514 7590 02/27/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER MORAN, RANDAL D	
			ART UNIT 2135	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/686,577

Applicant(s)

HAYASHI, JUNICHI

Examiner

Randal D. Moran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/17/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/25/2003 and 2/2/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. Claims 1-16 are pending in this application.
2. The Information Disclosure Statements filed on 11/25/2003 and 2/2/2004 has been considered by the examiner.

### *Double Patenting*

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. **Claims 13-16** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-16 of

compending **Application No.10/686579**. Although the conflicting claims are not identical, they are not patentably distinct from each other because “arranging the partial encoded data that constitute encoded data of a tile, arranging the partial encoded data toward a terminal in ascending order of priority in decryption” is already suggested in the storing of images in a hierarchical tree that repeatedly uses adjacent tiles to form tile groups creating the tree. Using adjacent tiles to form the tree would require that the tree be formed in an order of ascending priority.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. **Claims 7, 8, 11, 12, 15, and 16** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, as they do not fall under any of the statutory classes of inventions. The language in the claims raise an issue because the claims are directed merely to an abstract idea that is not tied to an article of manufacture which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

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The claims could reasonably be drawn to functional descriptive material, per se, i.e., "program" may be taken to mean software alone, and as such, the claims would be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 9-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Asano et al. (US 2002/0085722)**, hereafter "Asano," in view of **Imao et al. (US 4,994,023)**, hereafter "Imao," in further view of **Weiss (US 4,754,482)**.

10. Considering **Claims 9, 10, and 11**, Asano discloses an information processing method of receiving information containing encoded data of both encrypted and unencrypted tiles and reproducing an image (Fig. 5, [0120]), receiving key information to be used to decrypt a tile containing encrypted partial encoded data ([0198]); sequentially generating information up to desired partial encoded data located at a lower layer of a tile of interest on the basis of the received key

information of the tile ([0203]); and decrypting each encrypted partial encoded data by using the key information generated for each partial encoded data ([0204]).

Asano does not disclose repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from adjacent tile groups on the basis of the received information so as to define a hierarchical structure of the tile groups.

Imao does disclose repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from adjacent tile groups on the basis of the received information so as to define a hierarchical structure of the tile groups (column 3- lines 14-33, Fig. 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano by repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups so as to define a hierarchical structure of the tiles and tile groups as taught by Imao for the benefit of creating a balanced tree when it comes to the retrieval time of each node (Imao- column 6- lines 58-65).

The combination of Asano and Imao does not explicitly disclose for a plurality of partial encoded data that constitute encoded data of a tile located at a terminal of the hierarchical structure, arranging the partial encoded data toward the terminal in ascending order of priority in decryption so as to define a tree structure that

nodes the respective tile groups, the respective tiles, and the respective partial encoded data.

Weiss does explicitly disclose for a plurality of partial encoded data that constitute encoded data of a tile located at a terminal of the hierarchical structure, arranging the partial encoded data toward the terminal in ascending order of priority in decryption so as to define a tree structure that nodes the respective tile groups, the respective tiles, and the respective partial encoded data (column 7- lines 67-68, column 8- lines 1-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano, JPEG2000, and Imao by arranging the partial encoded data toward the terminal in ascending order of priority in decryption as taught by Imao for the benefit of not erroneously decrypting the cipher text provided to the D.E.S. circuit (Weiss- column 8- lines 8-13).

11. Considering **Claims 13, 14, and 15**, Asano discloses providing a decryption key for an image containing encoded data of both encrypted and unencrypted tiles (Fig. 5, [0198]), and storing basic decryption key information located at an uppermost layer of the image which has a hierarchical structure ([0021]), sequentially deriving decryption key information from the basic decryption key to a lower layer until reaching the designated partial encoded data of the

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designated layer and, when decryption key information for the corresponding partial encoded data is generated ([0203][0204]).

Asano does not disclose an image, which has a hierarchical structure, constructed by repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from adjacent tile groups.

Imao does disclose an image, which has a hierarchical structure, constructed by repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from adjacent tile groups (column 3- lines 14-33, Fig. 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano by repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups so as to define a hierarchical structure of the tiles and tile groups as taught by Imao for the benefit of creating a balanced tree when it comes to the retrieval time of each node (Imao- column 6- lines 58-65).

The combination of Asano and Imao does not disclose for a plurality of partial encoded data that constitute encoded data of a tile, arranging the partial encoded data toward a terminal in ascending order of priority in decryption.

Weiss does disclose for a plurality of partial encoded data that constitute encoded data of a tile, arranging the partial encoded data toward a terminal in ascending order of priority in decryption (column 7- lines 67-68, column 8- lines 1-12).



Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano, JPEG2000, and Imao by arranging the partial encoded data toward the terminal in ascending order of priority in decryption as taught by Imao for the benefit of not erroneously decrypting the cipher text provided to the D.E.S. circuit (Weiss- column 8- lines 8-13).

The combination of Asano, Imao, and Weiss does not explicitly disclose the processing method of a server which is connected to a network, information is received from a client, and notifying the client of the decryption key information. Official notice is taken that it would have been obvious to one of ordinary skill in the art at the time of the invention to use a server connected to a network where information is received from the client and notifying the client of the decryption key information in combination with the teachings of Asano, Imao, and Weiss for the benefit of being able to share information across the network.

12. Considering **Claims 12, and 16**, the combination of Asano, Imao, and Weiss discloses storing the computer program of claim 7, 11, and 15 respectively (Asano- [0059]).
13. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Asano et al. (US 2002/0085722)**, hereafter "Asano," in view of **Imao et al. (US**

**4,994,023**), hereafter "Imao," in further view of **JPEG 2000 Part 1 Final Committee Draft Version 1.0, ISO/IEC JTC1/SC29 WG1. 16 March 2000**, hereafter "JPEG2000," in further view of **Weiss (US 4,754,482)**.

14. Considering **Claims 1, 6, and 7**, Asano discloses encrypting the encoded image data ([0021] lines 2-5), generating encryption key information for a node located at an uppermost layer of the tree structure (Fig. 3A- item S303, [0193] lines 3-7, [0198]), executing, up to a node located at the terminal, processing for generating encryption key information for a node of interest on the basis of encryption key information generated for a node located at an upper layer ([0203][0204]); when a designation input is given to define, as an object to be encrypted, a desired node position in nodes of the partial encoded data in the tree structure, setting, as an object to be encrypted, partial encoded data which is located at a higher layer and contains partial encoded data at the node position that is defined by the designation input (0198), [0212]); and executing encryption processing for each partial encoded data, which is set as an object to be encrypted, by using an encryption key generated for the partial encoded data and outputting the encrypted partial encoded data and unencrypted partial encoded data (Fig. 5, [0160] lines 2-6).

Asano does not explicitly disclose an information processing method of receiving encoded image data compression-coded for each tile.

JPEG 2000 does explicitly disclose an information processing method of receiving encoded image data compression-coded for each tile (p.8- General Description, ¶ 1-2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano by the information processing method of receiving encoded image data compression-coded for each tile as taught by JPEG2000 for the benefit of using a standard that is well known in the art to create the code stream.

The combination of Asano and JPEG2000 does not disclose repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups so as to define a hierarchical structure of the tiles and tile groups, and a node located at an uppermost layer of the tree structure for an entire image expressed by the encoded image data.

Imao does disclose repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups so as to define a hierarchical structure of the tiles and tile groups (column 3- lines 14-33, Fig. 6), and a node located at an uppermost layer of the tree structure for an entire image expressed by the encoded image data (column 1, lines 57-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano and JPEG2000 by repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups so as to define a

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hierarchical structure of the tiles and tile groups and having the uppermost node of the tree represent the entire image as taught by Imao for the benefit of creating a balanced tree when it comes to the retrieval time of each node (Imao-column 6- lines 58-65).

The combination of Asano, JPEG2000, and Imao does not explicitly disclose for a plurality of partial encoded data that constitute encoded data of a tile located at a terminal of the hierarchical structure, arranging the partial encoded data toward the terminal in ascending order of priority in decryption so as to define a tree structure that nodes the respective tile groups, the respective tiles, and the respective partial encoded data.

Weiss does explicitly disclose for a plurality of partial encoded data that constitute encoded data of a tile located at a terminal of the hierarchical structure, arranging the partial encoded data toward the terminal in ascending order of priority in decryption so as to define a tree structure that nodes the respective tile groups, the respective tiles, and the respective partial encoded data (column 7- lines 67-68, column 8- lines 1-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano, JPEG2000, and Imao by arranging the partial encoded data toward the terminal in ascending order of priority in decryption as taught by Imao for the benefit of not erroneously decrypting the cipher text provided to the D.E.S. circuit (Weiss- column 8- lines 8-13).

15. Considering **Claim 2**, the combination of Asano, JPEG2000, Imao, and Weiss discloses the encryption key information is generated using a function, which has a one-way direction from the upper layer to a lower layer ([0222][0223][0224] lines 1-4).
16. Considering **Claim 3**, the combination of Asano, JPEG2000, Imao, and Weiss discloses the function generates the key information by using coordinate position information of a tile group, a tile, or partial encoded data located at the lower layer (Imao- column 5, lines 46-52, Asano- [0203][0204]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Asano, JPEG2000, Imao and Weiss by using the coordinate position of the of the tile or group to generate the key information for the benefit of having another organizational component to the system. Using the coordinate position to help encrypt the data would also provide information about where to store the data in the tree.

17. Considering **Claim 4**, the combination of Asano, JPEG2000, Imao, and Weiss does not explicitly discloses the encryption key information of the uppermost layer is output to a predetermined authentication server on the Internet.  
Official notice is taken that it would have been obvious to one of ordinary skill in the art to output the encryption key to an authentication server on the internet for

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the benefit of the increased security provided by the authentication server authenticating users and allowing them access to the key only after being authorized to see the image.

18. Considering **Claim 5**, the combination of Asano, JPEG2000, Imao, and Weiss discloses a step of displaying the received encoded data as a hierarchical structure of tiles, tile groups, and partial encoded data, and the desired partial encoded data of the desired layer is designated from the hierarchical structure displayed in the display step (Asano- [0256] lines 13-16).
19. Considering **Claim 8**, the combination of Asano, JPEG2000, Imao, and Weiss discloses storing the computer program of claim 7, respectively (Asano- [0059]).

### ***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wee, Susie J., Apostolopoulos, John G. Secure Scalable Video Streaming for Wireless Networks. Streaming Media Systems Group. Hewlett-Packard Laboratories, Palo Alto, CA USA. May 2001.

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21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal D. Moran whose telephone number is 571-270-1255. The examiner can normally be reached on M-F: 7:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Randal D. Moran

RD  
2/5/07



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